

The Role of NGOs in Improving Social Forestry Practice: Do They Promote Livelihood, Sustainability and Optimal Land Use in Bangladesh?

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The encroachment rate in forests in Bangladesh is high and increasing – accelerated by rural poverty and the demand for dwelling space and forest products – causing environmental degradation as well as loss of forest cover and productivity. The forests are managed by the Forest Department, although a substantial area of marginal land belongs to other semi-public agencies including Roads and Highways and the Water Development Board. This marginal land has been left unused or underutilized. In contrast, non-governmental organizations have an appropriate accessibility and technology disseminating ability to utilize this land in reducing poverty and enhancing rural livelihood, and have been highly active and successful in rehabilitating encroached forests. NGOs have added a new dimension to forest management, which has ensured community participation and protection of the forests, both planted and natural. This study evaluates the social forestry activities of four large NGOs, namely BRAC, Proshika, Caritas and CARE-Bangladesh, as well as national social forestry activities. By adopting a common partnership between public and private authority, property right conflicts have been resolved and rural livelihoods enhanced, and scope has been created for utilizing marginal land. The NGO partnership has been effective in reducing poverty and improving livelihoods. As an outcome of this common partnership, 33,472 km of roadside planting and 53,430 ha of reforestation activities have been carried out during the last two decades.

Keywords: NGOs' social forestry activities, rural livelihood, BRAC, Proshika, Caritas, CARE-Bangladesh, social forestry programs

INTRODUCTION

Bangladesh has a large floodplain as well as productive highland and lowland areas. Most of the forests are spread over the south-eastern part of the country, to the east of the Ganges Delta (Figure 1). The forestry sector contributed 3.28% to GDP and generated employment for 2% of total labour force in 2000 (FSB 2000). The natural forest resources are not sufficient to meet the need of the national population of

about 140 M for forest products. Consequently, the forests have been heavily exploited and degraded. The Forest Department has encouraged the involvement of NGOs – including Bangladesh Rural Advancement Committee (BRAC), Caritas, Proshika and CARE-Bangladesh – in promoting sustainable development and management of natural resources including forest resources.



Figure 1. Map of Bangladesh (UNO 2003)

In Bangladesh, mostly NGOs practice social forestry activities within a collaborative arrangement with the rural people under a form of co-management at group or individual level, on under-used or unused marginal lands. NGOs also adopt co-management with public agencies including the Forest Department (FD) and other relevant ministries, over natural forest and other degraded and unused public land. Since the emergence of NGOs, many social forestry models have been introduced and extended for rural development based on a co-management regime (FD-NGOs or NGOs-rural people). This paper examines the management pattern of social forestry by NGOs in Bangladesh.

Sen and Nielsen (1996) observed that co-management structures cover a wide variety of collaborative arrangements depending upon the role of the government and forest users. The co-management arrangement that is consultative today may be co-operative in future. Pomeroy (1998) argued that co-management should not be viewed as a unique model or single management strategy. Rather, co-management should be seen as an evolutionary process of resource management, adjusting and maturing to changing conditions over time and involving aspects of democratization, social empowerment, power sharing and decentralization. It is a flexible management strategy that provides for a forum or structure for action on participation, rule-making, conflict-management, power sharing, leadership, dialogue, decision-making, knowledge-generation and sharing, learning, and development among resource users, stakeholders and government. NGO social forestry activities follow a framework of co-management in which rural people are the nucleus and public agencies are the implementer. NGOs provide a common forum for the participation of the rural poor and facilitate knowledge sharing, contributing towards sustainable rural development.

Various sources suggest there are currently between 1,100 and 1,500 NGOs working in a variety of sectors in Bangladesh, with the common aim of socio-economic development of the rural and urban people, sharing the development process. NGOs – both in general and in Bangladesh – comprise a diverse range of organizations and are involved in a wide variety of projects. They play a role distinct from that of other development partners such as public or semi-public agencies for rural development.

A standard definition of NGOs as a civil society is ‘an intermediate associational realm between state and family populated by organizations which are separate from the state, enjoy autonomy in relation to the state and are formed voluntarily by members of society to protect or extend their interests or values’ (White 1994). The definition identifies two basic types of NGOs or ‘civil societies’ based on activities of service delivery and advocacy. Services are rendered by the NGOs towards development of the society, often with some service remuneration; advocacy concerns those activities carried out to influence public decision-making (Eade 2002). Some NGOs choose to pursue a combination of both activity types, a balance which is difficult to manage.

After the war for independence in Bangladesh, a number of NGOs were primarily advocacy organizations devoted to promoting social change at local levels. Subsequently, due to the social and developmental needs and necessary infrastructural reform, their strategic approach changed to service delivery (Davids and McGregor 2000). Whatever the changes made to strategies in serving society, NGOs face many constraints and clearly cannot carry the entire developmental load for rural Bangladesh.

The NGOs’ involvement in building or serving society towards the betterment of people’s lives may be examined from a theoretical point of view as well as in terms of how NGOs are linked to the state in performing their tasks and enhancing socio-economic development. Hyden (1997) reviewed the classical theories of civil society, noting the degree to which state and civil society are linked, and the degree to which civil society involves private economic interests, referring to the second of these dimensions as a space of self-governing associations which protect citizens from an over-bearing state. These dimensions have been carried forward into

contemporary discussions of civil society such as the so-called 'regime school' (Diamond 1994) and 'associational school' (O'Donnell and Schmitter 1986, Bratton and Van de Walle 1994). Both schools of thought define civil society as a pluralistic space whereby associations act as transmission media between the individual and the state. The associational school is largely inspired by Tocqueville (a French political writer in the mid-19th century noted for his analysis of American institutions), and views associational life as keeping the state in check through scrutinizing its operations and inculcating in the citizenry a sense of political participation and tolerance. Such formulations are paralleled in the writings of Putnam (1993) on civic participation, which sees an active associational and community life producing more stable governance and ultimately greater economic success.

Allen (1997) stated that civil societies are the associational school, and to a lesser extent also the regime school, which tends to inform many of the donor discourses on civil society. The theory of a civil society also explains its function in economic terms by stating that it permits the freedom to mobilise resources for self-help initiatives and in doing so relieves the burden on the state for welfare provision. In other words, civil societies are able to increase the welfare of the society and are seen as more efficient than corrupt states in delivering local social services. Thus, in resource management NGOs have the potential to provide a sound framework for sustainable development in terms of livelihood and resource utilisation. Where states fail to manage resource degradation problems, civil societies may be successful, because of their associational nature and democratic view in relation to resource users and the state. Since the social forestry activities of NGOs have been found to be a new mechanism to improve management and overcome resource degradation, it is appropriate to evaluate their activities in terms of sustainability, livelihood and resource utilization.

A study conducted by Islam (1991) reported that involvement of NGOs has the potential to support social and community forestry activities. Das (1995) observed that NGOs are highly active in forestry extension programs in Bangladesh. Das concluded that the NGOs, including Caritas with their social forestry extension program, could bring a change among the rural poor and marginal farmers, as well as achieving environmental conservation. The study also identified various problems and constraints of social forestry planning and implementation. Khan (1993) argued that the scope and scale of extension of community forestry could be expanded by NGOs. Community forestry programs managed by NGOs have a positive impact on livelihood as well as generating management practices towards sustainable environment. A study conducted by Proshika (2000) revealed that NGO participation in co-management and developing policy guidelines needs to be clearly defined. Although studies have focussed on the performance of NGO social forestry activities, it is necessary to evaluate these activities in detail in terms of sustainability, resource utilization and livelihood. The present study addresses these three aspects of NGO social forestry activities.

In order to examine the relationship between NGOs and other institutions, various Bangladeshi social forestry programs that have been undertaken based on a co-management regime or fully privately, are reviewed. Activities of NGOs as facilitators towards social forestry activities are then described, and shortfalls of NGOs in implementing social forestry activities are critically examined. Concluding comments and policy implications follow.

NON-GOVERNMENT ORGANIZATIONS IN BANGLADESH

Historically, Bangladesh was acclaimed as the 'Land of Gold' due to its affluence and the richness of its land. It was also known as the 'fertile land' in south Asia in the ancient days. Resources were generally managed by the local communities themselves through their local representatives from all classes, the *panchayats* or the local village councils composed of 50-100 elders. The panchayats had the supreme power to make decisions on landownership disputes, which was socially acceptable by the people of that time. Under this traditional communal system, everyone enjoyed the right to the fruits of their labour, and food was in adequate supply. However, it is difficult to claim that the quality of life and food security were due to the panchayat pattern of civil society. The small population and high soil fertility contributed to the successful farm economy. The panchayat was a form of old civil society which was holding more power but providing less co-ordination between the society and state, and so caused a loss in welfare of the society in terms of civil rights.

During the Muslim rule and British colonialization, the panchayat system was displaced by the creation of new landlords – the *zamindars* – by virtue of the proclamation of the *Permanent Act* of 1793 by the British Government. This had far-reaching implications because the peasants who had traditionally enjoyed their hereditary rights over land and other resources suddenly became landless and servants under the control of the new ruling class. With the transformation of landownership and regulatory power from panchayat to zamindar, many of the peasants took on different forms of employment, resulting in the disintegration of the rural economy.

Landownership patterns became the new basis for determining social status, power and prestige in Bangladesh, and the hierarchical agrarian relations based on ownership and capital remains in place today. Famine broke out immediately after the liberation war, and the Rural Bangladesh 'land of gold' was, ironically, turned into a 'land of misery' and abject poverty. Disintegration of the panchayat-regulated stable landownership pattern led to a need for some agent between state and people to reduce poverty and promote sustainable resource management. The realization of a modern civil society – including NGOs or semi-public agencies – took place at this point, although international civil societies were working before independence was gained from Greater Pakistan in 1971. In this context, the NGOs took the initiative to assist government organizations in the implementation of agrarian reform. The new NGOs initially provided little service and struggled to develop. The lack of legislative decisions – concerning how the civil society coordinates with public agencies, how it participates in decision-making or whether it has to be strictly regulated – have constrained civil society development in 70s and 80s. The role of NGOs continues to be debated and modified, but progress is being achieved in partnerships in development work and participation in policy-making with public authorities.

Prior to liberation, war-stricken Bangladesh needed heavy relief services and rehabilitation support, and promoted the involvement of NGOs in reconstruction activities. In 1987, a Coordination Council for Land Reform was formally established under the Land Ministry. The government agreed to include NGO representatives, nominated by the NGO Coordination Council, and located both at

the district and upazilla levels. In the 1990s, the NGOs made significant contributions in the areas of organizing the landless farmers and providing education and training to increase farmers' knowledge and skills to enable them to participate actively in government programs. During the last 35 years, NGOs have diversified their development work to include education, health, finance and the empowerment of women. Most of the activities have been designed to provide special preference to the poor and promote rural development. NGO development in Bangladesh could be classified in four stages: 1971-72, when NGOs were involved particularly in relief and rehabilitation work; 1973-75 when efforts were made by the NGOs towards community development, as well as agrarian reform, health and cooperatives; 1976-1990 when the NGOs first undertook large-scale programs, complementing the national development systems and involving various organizations and institutions; and after 1990, with a more organized working environment and networking in realizing NGOs' visions.

After the second phase, institutional aspects and regulatory laws of NGOs were addressed by policy-makers, and they experienced growth and extensive involvement in rural development. Many government officials were not supportive of the growth of NGOs and their involvement in socio-economic development of the rural society. Government attitudes were also ambivalent due to the confusion of the role of civil society with public authority. The government strongly emphasized the participation of NGOs in national development while promulgating various laws and regulations to control their activities, impediments which were criticized by pro-NGO policy-makers. The government bureaucracy and political elite tended to exhibit a strong bias against NGOs, due to the active role played by leading NGOs in national elections and political issues. This could perhaps be attributed to the very nature of the government, and the existing socio-economic and political structures which have been mostly autocratic and to an extent undemocratic.

In recent years there have been some successful collaborative national ventures between NGOs and the government. However, the government appears concerned that the growing number of NGOs may lead to the creation of countervailing power blocs, which may eventually take over public functions. This negative perception of NGOs is not without foundation, and at present NGO involvement in political functions is again raising the tension. Thus, there is continuing adjustment in the legislative environment for the NGOs. Some of the requirements imposed on NGOs include:

- a) NGOs must formally register with a GO (Government Organization such as the NGO Affairs Bureau and Department of Social Welfare) to operate legally. GO project approval is required for NGO operations. The GO has the authority to monitor and inspect NGO projects and activities.
- b) The GO has the authority to remove and appoint new board members to govern a NGO, and to suspend and dissolve NGOs. NGOs must report and obtain approval for any expatriate involvement in their operations.
- c) Any amendment in a NGO's constitution must be approved by the GO. The NGO must formally register with the government in order to receive foreign aid, obtain GO approval to use foreign aid, and report on any foreign aid received. NGOs must file an annual report with the government for their

overall activities. Donors must obtain GO approval for any foreign contributions to a NGO.

- d) Foreign aid in foreign currency must be deposited with the Central Bank or GO-specific Bank. The Central Bank provides bi-annual reports on all NGO foreign currency accounts to key GO agencies. The GO has the authority to monitor and audit NGO accounts. GO review is required for a NGO's annual budget.

The NGO Operation Process

Most of the NGOs are driving their development programs with external financial support. In some cases, initial activities were financed by the owner or a cooperative or association, and subsequently the new NGOs have sought funding from donor agencies. The major donors of Bangladeshi NGOs are USAID, JICA, DFID, AUSAID, DANIDA, SIDA and the ADB. Most of these aid funds are used for program activities; a smaller amount is a service charge providing the financial support to run the NGO. By law, NGOs are non-profit organizations. A few NGOs involved in credit programs have attempted to manipulate the interest rate as a service charge, and have been seriously criticized by the policy-makers and beneficiaries. Generally, NGOs are not required to pay tax on their earnings. Due to interest in sustainability as organizations and established commercial operations, the government has since fiscal year 1989-90 been considering the imposition of a tax on NGOs, which has become a subject of dispute between the NGOs and government.

There appears to have been inadequate linkages between NGOs and government to form sustainable partnerships, although linkages appear to have strengthened recently. A few leading NGOs are directly involved in government programs and projects, although most maintain a safe distance while working in their respective areas of jurisdiction. As a result, NGOs are not able to incorporate their plans and programs easily in line with the government's major thrust and priorities. Linkages within the NGO sector are also poor, the organizations generally behaving as rivals, with some notable exceptions. However, during the last decade, some collaborative programs have been undertaken by a number of NGOs and government, including participatory forest rehabilitation projects. Since government was the main executive authority, the coordination of these projects was successful. It is rare for NGOs to undertake any development programs collaboratively with other NGOs under their own arrangement and execution.

TYPES OF SOCIAL FORESTRY AND SPECIES PLANTED

The type of community forestry which is presently practiced in Bangladesh may be regarded as a form of social forestry – which in this paper is defined to include community forestry. Social forestry can take various forms, depending on the societal linkages between people and forestry activities (Rao 1992). In defining social forestry Westoby (1989) stated that '[s]ocial forestry is forestry for helping the poor.... It involves tree planning and management, at the farm, village or community level, by or for small farmers and the landless'. A more formal definition of social forestry is 'any forestry activities aimed at providing goods and services for

the benefit of rural communities, particularly the poor' (Huq and Alim 1995). Table 1 summarises the features of the social forestry models adopted in Bangladesh, and lists tree species against each type of social forestry practice. The common product of social forestry activities is fuelwood. Agroforestry and woodlot social forestry are practiced to produce timber. The species widely chosen for social forestry are mostly multi-purpose tree species (MPTS), including *Acacia mangium*.

Table 1. Various social forestry models practiced in Bangladesh

Type of social forestry	Species interaction	Purpose	Tree species grown
Agroforestry	Shrub and woody perennials	Fuelwood, crops, fruit trees	<i>Acacia mangium</i> , <i>Eucalyptus camuldulensis</i> , <i>Acacia auriculiformis</i>
Strip plantation	Woody perennials	Fuelwood, vegetables	<i>Dalbergia sissoo</i> , <i>Eucalyptus camuldulensis</i> , <i>Acacia auriculiformis</i>
Woodlot plantation	Woody perennials	Fuelwood, timber	<i>Dalbergia sissoo</i> , <i>Eucalyptus camuldulensis</i> , <i>Acacia auriculiformis</i>
Rural and homestead agroforestry	Shrub and woody perennials	Timber, crops, fuelwood	<i>Samanea saman</i> , <i>Albizia indica</i> , <i>Terminalia arjuna</i> , <i>Acacia auriculiformis</i>
Community land and rural woodlot	Woody perennials	Timber, fuelwood	<i>Samanea saman</i> , <i>Albizia indica</i> , <i>Terminalia arjuna</i> , <i>Acacia auriculiformis</i> , <i>Swietenia spp.</i>
Plantation on canal banks	Shrub, vine and woody perennials, fruit trees	Crop and fuelwood	<i>Dalbergia sissoo</i> , <i>Terminalia arjuna</i> , <i>Acacia auriculiformis</i> , <i>Acacia mangium</i>
Plantation for watershed management	Woody perennials and vegetables	Crop and fuelwood	<i>Dalbergia sissoo</i> , <i>Terminalia arjuna</i> , <i>Acacia auriculiformis</i> , <i>Acacia mangium</i> , <i>Leucaena Laucocephala</i>
Coastal plantation	Bushy plants, palms	Protection and crops	<i>Dalbergia sissoo</i> , <i>Leucaena Laucocephala</i>

GOVERNMENT-ASSISTED PARTICIPATORY SOCIAL FORESTRY IN BANGLADESH

The fundamental aim of social forestry activities was to engage forest users in protecting and regenerating forest resources. The major programs that have been undertaken since independence in 1971 are summarised in Table 2, and briefly discussed in the following section. Though the government has been the sole regulatory authority in executing these programs, in most cases NGOs were involved in one way or another, such as for monitoring, training and technological support, as well as providing small amounts of credit at farm or household level.

Appendix A shows how peoples' participation through NGO services has been strengthened towards sustainable management of forestry resources.

Table 2. Participatory social forestry programs in Bangladesh

Social forestry program	Technology	Roads (km)	Area (ha)	Seedling (no.)
Betagi-Pomora community forestry program	Agroforestry		365	
Development of community forestry program	Agroforestry, woodlots		4120	
Forest extension services program	Afforestation	4200		49 M
Afforestation and nursery development program	Agroforestry, woodlots	17,272	24,425	
Agroforestry research program	Agroforestry		120	
Food assisted social forestry program				31 M
ADB assisted social forestry program	Agroforestry, woodlots	12,000	24,400	

The Betagi-Pomora Community Forestry Program

Betagi and Pomora are two villages situated about 26 km north-east of Chittagong city. Both villages are adjacent to where the Betagi and Pomora Community Forestry Projects were established side by side in 1979 and 1980 respectively. The total area under the Betagi Community Forestry Project is 190 ha of public land. Under the Pomora Community Forestry Project, the total area is 276 ha of protected forestland and 24 ha of public land. Each household was granted 1.62 ha of land for growing trees and horticultural crops, with technical and financial assistance from the Forest Department. This community program gave the landless an identity and a sense of direction in life. Before involvement in the program they were treated socially and economically as poor people who survive on others' favours. Participation in the forestry program changed their lives and raised their social status.

The Food-assisted Social Forestry Program

The main objectives of this program were to alleviate rural poverty, especially that of destitute women, by engaging them in forestry activities and environmental improvements. Initially on the basis of in-kind resources, the program included a small number of NGOs for raising strip plantations along the roads, embankments and highways, through a participatory approach. The FD provided the technical guidance to NGOs. At present, this is probably the largest participatory forestry program in Bangladesh. From 1990 up to 1998, about 31 M trees were planted under this program. The benefit sharing arrangement was contractual (participant 60% + NGOs 10% + landowners 30%). Many destitute women gained an opportunity to work and a new means to survive with much more dignity than begging. The program also increased the forest cover, with tree planting along roadsides and on other marginal land.

The Development of the Community Forestry Program

The activities of the first phase of this program began in 1981 and were completed in 1987. Strip plantations along the roads and highways, railways, canal sides, and district and Union roads totalled about 4000 km. Fuelwood plantations were established on 4800 ha of depleted public land, and depleted homestead woodlots were replenished in 4650 villages. Over 120 ha of agroforestry demonstration farms were established.

The Development of the Forest Extension Services Program

The development of Forest Extension Services (Phase II) began in 1980 with public financial support, and the program was subsequently amalgamated with the ADB-funded Community Forestry Project in the North West district. The main activities under this program were afforestation in about 3100 villages as well as roadside tree planting along 3600 km of primary highways and major roads and about 600 km of other roads.

The Afforestation and Nursery Development Program

This program is a follow-up of the Development of Community Forestry Program and Forest Extension Program, and aims to develop a sustainable tree resource base. It is designed to bring all suitable and available land under tree cover in the rural areas with active participation of local poor people. The main activities of the program include plantation establishment on 20,225 ha of depleted sal (*Shorea robusta*) forest areas, agroforestry practice on 4200 ha in the sal forestlands, and strip planting on 17,272 km along roads, highways and railway embankments. Originally the project was to be implemented by the Forest Department and Former Sub-district Council during the period of 1987 to 1994. However, in 1992, the Government decided that the all project activities were to be implemented only by the Forest Department.

THE SOCIAL FORESTRY ACTIVITIES OF NON-GOVERNMENT ORGANIZATIONS

At present, NGOs are facilitating social forestry, but with a dominant role in poverty alleviation and social development. Tremendous interest has been shown by NGOs in social forestry in all its implications and intent, resulting in a substantial increase in the number of private nurseries and the plantation area. Some NGOs are emphasizing homestead forestry in order to improve the socio-economic condition of landless farmers. Both local and national NGOs have been active in implementing agroforestry activities in various districts by the active participation of their organized group members. The social forestry activities of four large NGOs are discussed below.

BRAC's Social Forestry Activities

BRAC (Bangladesh Rural Advancement Centre) is one of the most active NGOs in terms of number of beneficiaries, conducting technology transfer and organizing activities for social forestry, to promote rural development and sustainability of resource use. Since commencing in 1972, BRAC's activities have expanded across

Bangladesh. The Rural Development Program (RDP) was launched in 1986 with the formation of Village Organizations (VOs)¹ as the basic unit of beneficiaries. The VOs organize the poor, providing them with credit and other necessary technical support to make optimal use of marginal land and adopt improved forestry practices. Table 3 lists the achievements of the social forestry programs carried out by BRAC up to 1997. Most of the social forestry components increased in scale over time. Roadside planting and sub-district afforestation were undertaken in 1993-95 only, with an area of afforestation of 1253 km, and the number of seedlings planted in coastal areas increasing by 77% from 1992 to 1996.

Nursery activities for timber and fruit species

BRAC established nurseries at each area office, producing a yearly average of 10,000-15,000 seedlings of various fruit, fuelwood and timber trees, which are sold within the community. The nursery workers are given one week of training in seedling production. BRAC provides credit and other inputs, technical support and regular follow-up services. The number of nurseries increased to 1949 in 1995, with nursery workers producing 16.45 M seedlings in that year. Grafting nurseries meet the increasing demand for high yielding variety (HYV) seedlings at the grass root level. A total of 258,996 grafted seedlings of mango, lemon and litchi were produced up to 1997 from these nurseries.

Plantation activities on marginal lands

The VO members plant seedlings of various species around their homestead areas, these are purchased from the members' nurseries. Roadside planting is a joint program between BRAC and the FD's *Thana Afforestation and Nursery Development Projects*. Under this model, trees are planted on roadsides, embankments, railway sidings and Union roads. Women were engaged in cultivating maize, brinjal, chillies and beans on adequately sloped roadsides². A program of coastal afforestation was undertaken on the island of the Kutubdia and Chokoria Sub-district in 1991 to create a tree buffer against cyclonic winds.

Agroforestry activities of the Rural Enterprise Project

A pilot agroforestry project was launched under the Rural Enterprise Project (REP), on private and government-owned land in the northern district, aiming to produce wood, fuel, fodder, fruit and vegetables. Farmers owning 0.35 to 0.50 ha of land were selected for the program, and given three days of training as well as credit, seeds, technical support and follow-up services. About 428 ha were brought under agroforestry, involving 863 participants. Participants benefited in terms of income and employment generation by participating in the project. The project had another objective which was to enhance the forest cover in northern Bangladesh to address the desertification problem (known as Barind-region degradation). Because of the positive socio-economic and ecological impacts, the project was subsequently extended.

¹ A Village Organization (VO) is the primary unit of BRAC at the rural level. The group leader communicates with BRAC, managing financial matters and preparing progress reports.

² To prevent soil erosion during the flood season, most of the road verges are sloped at about 45 degrees or less.

Table 3. Achievements of the social forestry program of BRAC

Activities	Cumulative up to December 1992	1993	1994	1995	Total for 1993 to 1995	Change between 1992 and 1996 (%)
No. of trained nursery workers	1375	933	578	485	1996	31
No. of nursery workers	790	608	401	150	1159	32
No. of seedling production (M)	9.20	9.26	13.17	16.45	38.87	76
Seedling planted in coastal areas (M)	0.33	0.39	0.765	0.27	1.43	77
Road covered under Thana afforestation (km)	N/A	600	520	133	1253	100
No. of beneficiaries involved in Thana afforestation	N/A	5580	998	745	7323	100
No. of trees planted under Thana afforestation (M)	N/A	0.72	0.60	0.29	1.61	100

Source: BRAC (1996).

Proshika's Social Forestry Activities

Proshika is one of the largest national NGOs in Bangladesh in terms of its beneficiary group and member numbers. Proshika took its first step in 1976 although the Proshika development process started in a few villages of the Dhaka and Camilla district in 1975. The name Proshika is an acronym of three Bengali words, which stands for training (Proshikkan), education (shikkha) and action (karmo).

The social forestry program of Proshika is a systematic intervention to enhance afforestation nationally, which has demonstrated that the poor are the best managers and protectors of the forest resources. Involvement of Proshika's group members in social forestry activities contributes substantially to poverty reduction in terms of generating income and employment. Table 4 summarises the achievement of Proshika's social forestry program. Homestead plantations, a nursery development project and strip planting under the *Thana Afforestation and Nursery Development Project* (TANDP) have been the most widely introduced programs. Roadside planting activities assisted by the World Food Program also covered 4585 km of roads. Various types of social forestry programs undertaken by Proshika are discussed next.

Table 4. Total achievement of social forestry program of Proshika

Type of activity	No. of sub-district	Road length (km)	Area (ha)	No. of seedlings produced and planted (M)	No. of groups involved	No. of group members (M)
Homestead plantation	100		0.00	5.52	14,055	0.24
Nursery development project	72		0.00	20.33	2076	0.03
Natural sal forest protection	7		962		229	0.004
WFP (World Food Program) assisted afforestation program	55	4585	94	2.12	2343	0.04
Agroforestry and woodlot forestry with TANDP	7		12,011	34.77	1615	0.03
Strip plantation with TANDP	48	2144		1.09	1728	0.03
Social forestry with group assistance	16	320		0.003	330	0.006
Total	100	8047	13,204	64.65	23,164	0.39

Source: Proshika (1997).

Support for establishment of homestead plantations

In many cases, the poor people do not have any land resources except the homestead. Proshika motivates its group members to plant multipurpose and fruit tree species in the homestead, which eventually become a source of income with little demand for labour input. Up to June 1997, a total of about 5.5 M seedlings of multi-purpose tree species (MPTs) and fruit trees were planted by the Proshika group members in their homesteads. Appendix A shows the nursery activities carried out by the rural women under Proshika's social forestry program. NGOs provide technical assistance along with credit facilities to the rural poor for small scale nursery business.

Strip block plantation

Proshika group members establish strip plantations on the sides of feeder roads of the Union Council³, embankments of the Water Development Board and beside railway tracks. They also raise block plantations both on private and public land under a long-term lease agreement on a benefit sharing arrangement (equity in timber). The groups receive financial support to establish plantations from the Revolving Loan Fund (RLF) of Proshika. As an example of this activity, about 8047 km of strip plantation and 13,204 of block plantation had been raised by Proshika groups by 1998.

Agroforestry and woodlot forestry

Proshika group members participated in agroforestry and woodlot planting under the *Thana Afforestation and Nursery Development Project (TANDP)* in May, 1992.

³ The Union Council is an elected authority that functions as a local government.

27,170 Proshika group members raised 12,011 ha of agroforestry and woodlot forestry by planting 34.77 M seedlings from 1989-90 to 1996-97.

Participatory sal forest protection

One of the greatest contributions of Proshika is the introduction of the concept of participatory forest management in Bangladesh. Proshika was able to persuade the government to introduce this program which was carried out on 961.94 ha of public forestland under a regime of co-management between the government and Proshika.

Caritas's Social Forestry Activities

Caritas is a national NGO established by the Catholic Bishop Community for human welfare and development purposes in East Pakistan prior to liberation. In 1976 it was renamed Caritas Bangladesh. Presently Caritas is conducting various programs for rural development, including social forestry activities on homesteads, roadside and crop land and land around institutions.

Homestead and roadside plantations

In 1995-96 and 1996-97, a total of 175,626 seedlings (exceeding the target of 136,500 seedlings) were distributed in the four regions of Barisal, Mymensingh, Rajshahi and Barind. In 1996-97, Barisal region on its own accomplished 5 km of roadside planting, against a target of 8 km, but collaboration with the Thana (sub-district) afforestation program of the FD led to another target of 8 km. In 1996-97, the Mymensingh region planted 5 km, against a target of 10 km. Table 5 provides details of the program. Figure 2 illustrates a roadside plantation.

Table 5. Achievement of Caritas in roadside planting up to 1996-97

Region	Total no. of seedlings		Length (km)	
	Target	Achievement	Target	Achievement
Barisal	15,300	23,850	17	33
Mymensingh	12,600	11,477	14	17
Rajshahi	4500	6000	08	6.5
Barind	12,100	12,795	12.5	13

Source: CARITAS (1997).

Fallow land agroforestry

Caritas converted some (small) areas of fallow land of Barisal, Rajshahi and Mymensingh regions into cultivatable land, particularly during 1995-97. Fallow land agroforestry practices were mostly undertaken by the marginal farmers under the Caritas social forestry program. In Mymensingh region the members of Caritas are tribal people, living in the undulating northern part of Bangladesh, engaged in animal raising and cottage industry, and to a lesser extent in cropping.

Homestead vegetable cultivation and village demonstration nursery

Winter vegetable seeds were distributed in Barisal and Rajshahi under the homestead vegetable cultivation program. Up to 1996-97, the total number of village

nurseries established was 525 (with a land area of 28.73 ha), of which 375 belonged to male group members and 150 to female group members.

Tree plantations in institutional premises

Table 6 reports the number of institutions establishing plantations in four regions during 1995-97 with support from Caritas. Targets were exceeded in three regions.

Table 6. Achievement in tree plantation in institutional premises during 1995-1997

Region	Number of institutions	
	Target	Achievement
Barisal	36	76
Mymensingh	68	57
Rajshahi	28	52
Barind	32	34

Source: Caritas (1997).

The Social Forestry Activities of CARE-Bangladesh

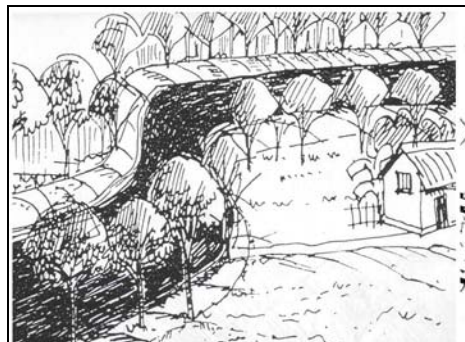
In 1990, CARE Bangladesh initiated a two-and-a-half year pilot project to irrigate the tree component of the Local Initiatives for Farmer's Training (LIFT), with support of a grant from the Private Rural Initiative Programme (PRIP). The purpose of the pilot project was to increase tree planting and tree management among participants. The agroforestry components in LIFT were: a) promoting tree planting of homesteads in order to upgrade existing stocks and increase net productivity; b) bringing about synergies between vegetable gardening and tree planting; and c) achieving sustainable impacts on income and nutrition for marginal and functionally landless households. Achievements of LIFT included establishment of 109 micro-nurseries producing 250,000 seedlings, a central nursery producing 27,500 seedlings, and the planting of 12 seedlings per household on average (Mahat 1993).

The Chittagong Homestead Agroforestry Project (CHAP)

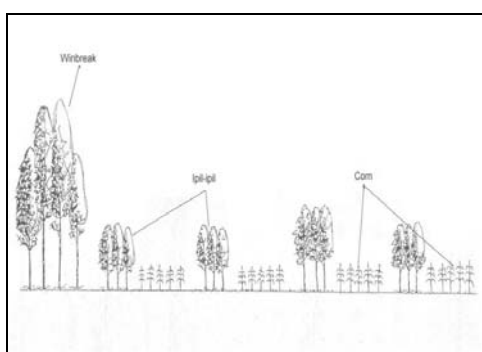
The CHAP project aimed to improve the socio-economic status of 13,200 low-income rural families by 1999 in three coastal sub-districts of Chittagong and in the Cox's Bazar District. The activities were: (a) 240 women participants operated commercially viable nurseries to increase tree resources; (b) participants increased their productivity through agroforestry practices; and (c) CHAP strengthened the capacity of local NGOs by providing training and technical assistance to help them carry out agroforestry activities for their members.



2a: Plantation on marginal land



2b: Plantation on roadside



2c: Homestead agroforestry



2d: Plantation on canal banks



2e: Agroforestry-strip plantation



2f: Enrichment plantation in sal

Source: Figure 1– 4 (Magno *et al.* 1992), Figure 5 – 6 (Field survey)

Figure 2. Various social forestry models practiced by the NGOs

Figure 2a shows the plantation on marginal lands along the railroads. Figure 2b shows the plantation on roadsides which is a common and successful social forestry

model in Bangladesh. Figure 2c shows a multi-storeyed home garden system which could often be seen in each rural household. Previously species selection for home gardens was governed by use mainly for home consumption. NGO intervention informed people about productive species and the scientific management of home gardens along with development of markets. Figure 2d shows the plantation on canal banks which has been found to be highly popular in rural areas. The main aim of this model – as with other social forestry models on marginal land – is to produce fuelwood and fodder. In addition, these plantings help reduce canal bank erosion and partially improve food availability for aquatic animals in canals by providing biomass for fertilizing the growth of zooplankton. Figure 2e shows an agroforestry farming system of pineapple and MPTs (Multipurpose Tree Species) on degraded forestland. The plot is situated in the sal (*Shorea robusta*) forest. Figure 2f shows a 10 year old enrichment planting which is also on degraded sal forest land.

AN EVALUATION OF NGO SOCIAL FORESTRY ACTIVITIES

NGOs have been working to develop social forestry in Bangladesh for two decades. Various programs with various objectives have been undertaken by the NGOs to achieve socio-economic development of the rural poor as well as sustainability in resource management and use. Therefore, it is relevant to ask to what extent the aims of social forestry have been achieved, in terms of livelihood, sustainability and optimal utilization of land.

Do the Activities Enhance Livelihoods?

An evaluation of NGO involvement in social forestry reveals that they have achieved success in the following areas by increasing the participants' livelihood, sustainability and utilization of marginal land:

Human resource development

- a) Motivation of the rural poor towards plantation activities by creating awareness and providing training in planting techniques and of the economic and commercial value of trees.
- b) Organization of rural poor and landless farmers, unemployed youth and other socio-economically marginalised people into productive and self-sustained groups for taking initiatives together for ensuring sustainable income generation (Farington *et al.* 1989, Safa 2004).
- c) Playing an important role in organizing training of their target groups in forestry techniques and improved silvicultural practices, and also various modern methods for nursery seedling production and tree improvement.

Income and employment generation

- a) Emphasizing the role of social forestry along with socio-cultural awareness as a sustainable means of creating employment opportunities and augmenting income, as an effective tool of rural poverty alleviation (Safa 2004).

- b) Creating opportunities for small-scale farm businesses to commence using small-scale credit and own capital.
- c) Providing a concept and technology for intensive use of homestead areas for generating surplus income.
- d) Accelerating local market mechanisms by creating an own market within the community with competitive prices and improved consumers' and producers' welfare.
- e) Indirectly creating the opportunity of employing skilled manpower including graduates in agriculture and related disciplines. The absorption by NGO of these skilled fresh jobseekers certainly reduced the pressure of unemployment on the Bangladesh economy.
- f) Creating opportunities for utilizing the labour of rural housewives for generating surplus income, particularly in nursery activities under the social forestry program. Traditionally and culturally, most of the rural housewives are not allowed to work outside of their household area.

Improving the gender balance and settlement of destitute women

- a) Creating scope for the women to improve their standard of living. The number of female participants is higher in NGO social forestry programs than in the public social forestry programs.
- b) Increasing female leadership in rural areas. This is a sign of gender balance and a better future for the destitute women, which are both outcomes of the extensive training and motivation programs of the NGOs. Some NGOs confine their activities to women, adding another dimension to the gender development and efficiency to compete with their male counterparts.
- c) Appointing female employees with the aim of constructive communication between female group members and the facilitator. This is a policy commonly followed by the NGOs in Bangladesh, which ensures the participation of female skilled manpower and removes the communication gap between rural woman groups and male facilitators.

Overall socio-economic development and social security

- a) Improving income and employment opportunities and enhancing overall rural socio-economic development. Social forestry activities including nursery operations have generated income and employment.
- b) Providing a shelter for landless and destitute women, to consult about their future and decisions on subsistence. NGO social forestry activities have created a substantial opportunity for these destitute women by providing services such as small credit for social forestry activities including home gardens, nursery developments and institutional plantations. Moreover, the destitute women have an opportunity to consult NGOs about their future plans which gives them the confidence to meet any difficulties in income-generating activities.
- c) Reducing anti-social activities and hence improving the social security of the rural society. Unemployment is a basic cause of social unrest and anti-social elements which is being met by NGO employment generating activities. For example,

rural youths have found a way of life either serving the society as an employee of an NGO or starting their own businesses.

Do the Activities Help Increasing Sustainability?

The following examples are evidence that NGO activities increase the sustainability of land use:

- a) A general achievement of NGO social forestry activities in terms of sustainability is the increase in overall tree cover of the country, which slows down the soil degradation, for example in areas of sal forest.
- b) Extensive research and extension work has helped the enrichment and replenishment of the depleting homesteads. An awareness of how to maximize the utilization of homestead areas can be seen in the rural area.
- c) Technological awareness is revealed in NGO groups. The group members have been trained to follow sustainable land management techniques and forestry practices. NGO social forestry activities have expanded the horizon of thought and practice of planting trees, with improved technological management without hampering the output of the main crops or environmental quality.
- d) NGO technology transfer programs have infused the idea of scientific and productive use of the homesteads by selecting various species of timber, fruit, fodder, fuelwood and bamboo saplings for planting (Huda 1987).
- e) Own resources (home-grown) have been created for all types of forest products, so that the local demand could be met by the local sources.
- f) Social forestry activities have increased fuelwood production, reducing expenditure on other fuel types including kerosene and petrol.
- g) Nursery activities by both groups and individuals have been found to be highly successful in accelerating tree planting activities in Bangladesh. Notably, the number of private nurseries in Bangladesh has increased from a few hundred to about 4,000 during the last three to four years.
- h) NGOs have been working to develop various successful and innovative approaches and models of social forestry that are directed towards sustainable resources as well as social development

Do the Activities Help Ensure Optimal Utilization of Land?

A large amount of urban and rural land belonging to the government and semi-government authorities is left unused or under-utilized, due to ownership and governance issues. Playing the role of facilitator, NGOs have linked the potential land resource users to the public authority.

- a) NGOs have brought unused and under-used public land under a co-management regime for maximum utilisation. By undertaking public-private partnerships, most of the marginal lands such as roadsides and railway sides have been planted with multi-purpose trees.
- b) Some programs have implemented the concept of shelterbelts to minimize adverse effects of natural calamities and river erosion. Selective tree species have been planted on river banks and dam walls.
- c) In order to minimise the loss of cropland, various cropland agroforestry models have been followed by NGO groups. Side by side, there are various social

forestry programs – for example, dike-cropping and silvi-pisciculture – that ensure better land management.

- d) The NGOs play a supplementary role to fill the gaps as facilitators and collaborate with government agencies to remove the constraints on utilizing public land.

Shortfalls of NGO's Participation in Social Forestry Programs

NGO social forestry activities are not free of weaknesses. Several issues need to be investigated and remedied in the interest of sustainable expansion of overall social forestry programs as well as the socio-economic development of the users.

- a) NGOs are often found to have a strong profit motive that has resulted in negative experiences for the group members and other entities involved in social forestry programs. In Bangladesh it is commonly believed that NGOs are supposed to follow a welfare motive and should be working for the deprived sections of the population. Thus, the profit motive attitude derails the organization from its objectives and creates a social reluctance to cooperate with NGOs.
- b) NGOs lack coordination with government bodies at local and national level and delay implementation of necessary tasks and waste members' valuable time (Cort 1989). Consequently, people lose trust in NGO activities, implying that NGOs are not necessarily working for people.
- c) Human resource policies are not well defined to the NGO staff and beneficiaries in terms of their end-benefit. Bearing the financial constraints, some NGOs recruit unskilled people, leading to a decline in the quality of services such as training and office management.
- d) The rigidity of NGOs in the formation of groups for their social forestry activities constrains communication and reliability. The approach used in selecting group members whilst ensuring an equal chance of joining, is not conducive to the formation of strong and efficient groups. Since heterogeneity within groups is a basic problem in social forestry activities, attempts such as motivation and creating awareness of equality are made to achieve homogeneity in groups. In some cases, social tensions have arisen between the different groups and also between the members and non-members.
- e) NGOs are often accused of being bureaucratic in terms of performing their activities and of lacking transparency regarding their activities. There are also cases of NGOs not following any well-structured or uniform and institutionalized recruitment and benefit payment system for their employees. Lack of security of service of employees is also one of the allegations about the NGO structure (Biggs and Seneratne 1986).
- f) The benefit-sharing mechanism between the organization and beneficiaries followed by NGOs is not uniform and in many cases no written agreements exist (Farooque 1993). Criticisms are levelled at the sharing amount, credit system, collection of small credit and interest rate charged to borrowers. Sometimes beneficiaries claim that NGOs charge high interest rates which constrain the achievement of successful outcomes of the program. The sharing mechanism differs not only between NGOs but also from place to place within the same NGOs.

CONCLUDING COMMENTS

Bangladesh undoubtedly has a great prospect in social forestry through recovering the eroded environment and providing improved socio-economic conditions for the poor. Thus, social forestry activities of NGOs should be appreciated and facilitated by both the government and the people. Though they have some shortfalls in implementing new innovations in communities, NGOs need policy support to extend their programs. Another favourable result from NGO social forestry activities is employment generation. More and more women are obtaining employment from social forestry practices by being involved in activities such as seedling production and dike-cropping. The involvement of women in social forestry activities can help them to generate some income through little extra effort and time.

In conclusion, the following points can be noted. NGOs can enter joint undertakings with government to spread their activities in public forest areas. Written agreements should be drawn up with people which would sustain their program much more efficiently by avoiding the dispute issues such as property right conflicts, unsatisfactory benefit sharing arrangements, and unpopular credit and repayment structures. There is a need for NGOs to be more conscious about coordinating with each other by conducting social forestry programs on a shared basis. NGOs should express their planned activities to rural people in a transparent way. A bureaucratic approach is to be avoided to achieve their goal at the grass roots level. Trained foresters need to be recruited to improve the NGOs' technical capabilities and provide extension on updated techniques for strengthening the NGOs' social forestry program further towards sustainability.

There is a clear need for a common coordinating authority composed of government and NGO representatives so that bureaucratic complexities can be solved. This authority must be involved in reviewing the NGOs' social forestry activities. NGOs must produce case studies and documentation proving the replicability and effectiveness of their development models both at the micro and macro level to overcome the bureaucratic complexities and attract more financial support.

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Appendix A

Public-Private Partnership in Social Forestry Activities

